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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,216	03/30/2001	Victor B. Lortz	42390P9915	6073

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EXAMINER

ZHEN, LI B

ART UNIT PAPER NUMBER

2126

DATE MAILED: 01/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,216

Applicant(s)

LORTZ, VICTOR B.

Examiner

Li B. Zhen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,9,10,12-15 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,9,10,12-15 and 17-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1, 3 – 6, 9, 10, 12 – 15 and 17 – 19 are pending in the current application.

Claim Objections

2. Claim 12 is objected to because of the following informalities: claim 12 refers to the article of claim 12 and depends from itself. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1, 3, 6, 10, 12, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,751,753 to Nguyen et al. [hereinafter Nguyen] in view of U.S. Patent No. 6,308,326 to Murphy et al. [hereinafter Murphy].**

5. As to claim 1, Nguyen teaches the invention substantially as claimed including a method [col. 1, line 65 – col. 2, line 15] comprising:

identifying a plurality of states [state machine is comprised of a plurality of states; col. 4, lines 5 – 7] and associated state classes [state class 102, Fig. 3; col. 4, lines 55 – 67] to a state machine [a state machine 154, Fig. 4; col. 7, lines 9 – 29];

identifying a plurality of events and associated state transitions to the state machine [each state is the culmination of a unique set of events or measured parameters causing transitions to such state; col. 5, lines 7 – 25]; and

the state machine creating state objects [state machine would comprise all the states instantiated from the state classes 104 and 106; col. 5, lines 31 – 39] and a transition map [transition array] according to the plurality of states and events [transition array 110 defines the interconnection of the states, Fig. 3; col. 5, lines 7 – 25].

6. Although Nguyen teaches the invention substantially, Nguyen does not teach at least one plug-in class to the state machine, the plug-in class configured to monitor predetermined events.

However, Murphy teaches at least one plug-in class [code module interfaces (CMIs) can be selectively activated by a user at run-time; col. 2, lines 26 – 38] to the state machine [CMIs provide a technique for adjusting the exit criteria of states in a state machine (as well as providing the capability to add new states) on a selectable, run-time basis; col. 7, lines 16 – 29] and the plug-in class [col. 9, lines 16 – 29 and col. 13, lines 22 – 27] is configured to monitor predetermined events [CMIs provided state masks which indicated the particular state transitions during which they were to be called; col. 7, lines 29 – 52].

7. It would have been obvious to a person of ordinary skilled in the art at the time of the invention to apply the teaching of providing plug-in class to state machines and the plug-in class configured to monitor predetermined events as taught by Murphy to the invention of Nguyen because this allows a user to adjust the functionality of a program

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which operates as a state machine at run-time by providing ability to change the operating state of the control software itself [col. 2, lines 26 – 29 and 38 – 40 of Murphy].

8. As to claim 3, Nguyen as modified teaches the state machine creating a plug-in object [CMIs 60 and 62, Fig. 6; col. 7, lines 29 – 52 of Murphy] according to the plug-in class [col. 9, lines 16 – 29 and col. 13, lines 22 – 27 of Murphy], the plug-in object interacting with the transition map to cause state transitions [CMI may change the next state to which the download engine will transition after the CMI runs; col. 8, lines 52 – 65 of Murphy].

9. As to claim 6, Nguyen as modified teaches a method [col. 1, line 65 – col. 2, line 15 of Nguyen] comprising:

extending a base state class to create at least one extended state classes [counter state class 106 which provides an extended class including additional attributes to implement a counter state; col. 4, lines 55 – 67 and col. 6, lines 35 – 43 of Nguyen];

configuring a base state machine class to operate with the extended state classes [col. 8, lines 39 – 62 of Nguyen];

associating the extended state class with a state [define counter states that "count" the number of occurrences of an event; col. 8, lines 63 – 67 and col. 6, lines 36 – 54 of Nguyen];

extending a base plug-in class to create at least one extended plug-in classes [code module interfaces (CMIs) can be selectively activated by a user at run-time; col. 2, lines 26 – 38 of Murphy];

configuring the base state machine class to operate with the extended plug-in classes [software may include one or more code module interfaces (CMIs) that are selectively activated at run-time; col. 3, lines 23 – 43 of Murphy]; and

associating an event monitored by the extended plug-in class with a state transition [CMIs provided state masks which indicated the particular state transitions during which they were to be called; col. 7, lines 29 – 52 of Murphy].

10. As to claims 10 and 12, these are product claims that correspond to method claims 1 and 3; note the rejections to claims 1 and 3 above, which also meet these product claims.

11. As to claims 15 and 17, these are system claims that correspond to method claims 1 and 3; note the rejections to claims 1 and 3 above, which also meet these system claims.

12. **Claims 4, 5, 9, 13, 14, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen and Murphy further in view of U.S. Patent No. 6,138,171 to Walker [cited in the previous office action].**

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13. As to claim 4, Nguyen as modified teaches state class and instantiating state objects [col. 5, lines 31 – 39 of Nguyen] but does not specifically teach a state factory.

However, Walker teaches a plurality of states and associated state classes to a state machine [col. 3, lines 10 – 16; col. 3, line 1; col. 3, lines 27 – 32] and a state factory object [col. 8, lines 35 – 52].

14. It would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of a state factory as taught by Walker to the invention of Nguyen as modified because Factory object possess the knowledge to construct an instance of a particular class of objects and allows these objects to be dynamically created [col. 8, lines 35 - 40 of Walker].

15. As to claim 5, Nguyen as modified teaches identifying at least one plug-in factory to the state machine [col. 8, lines 35 – 52 of Walker], the state machine invoking the plug-in factory to create the plug-in objects [col. 2, lines 26 – 38 of Murphy].

16. As to claims 9, these are rejected for the same reasons as claim 5 above.

17. As to claims 13 and 14, these are product claims that correspond to method claims 4 and 5; note the rejections to claims 4 and 5 above, which also meet these product claims.

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18. As to claims 18 and 19, these are system claims that correspond to method claims 4 and 5; note the rejections to claims 4 and 5 above, which also meet these system claims.

Conclusion

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (571) 272-3768. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SUE LAO
PRIMARY EXAMINER

Li B. Zhen
Examiner
Art Unit 2126

lbz